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EXAMINER

WONG, BLANCHE

ART UNIT PAPER NUMBER

2616

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/998,504

Applicant(s)

DUBUC ET AL.

Examiner

Blanche Wong

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-15,17-19,21,22 and 26-30 is/are rejected.
- 7) ☒ Claim(s) 3-5,16,20,23-25 and 31-33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1,2** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by admitted prior art RFC 2475 ("RFC").

With regard to claim 1, RFC discloses

a service interface (**buffer of DS boundary nodes**) ("A DS domain has a well-defined boundary consisting of DS boundary nodes which classify ... ingress traffic ... to ensure that packets which transit the domain are appropriately marked to select a PHB from one of the PHB groups supported within the domain, Section 2.1 Differentiated Services Domain; and "PHBs are implemented in nodes by means of some buffer management..." and "As described in [DSFIELD], a PHB is selected at a node by a mapping of the DS codepoint in a received packet", Section 2.4 Per-Hop Behaviors (PHBs)) for receiving the data packets (received

**packet)**, the data packets including a differentiated service codepoint field (**DS codepoint**) having a plurality of differentiated service codepoint value (**DS codepoint ... used to select a PHB, Section 1.2 Terminology**) (it is Examiner's position that **DS codepoint has different values**);

a differentiated service profile (**PHB group**) associated with the service interface ("These PHBs may be used as building blocks to allocate resources and should be specified as a group (**PHB group**) for consistency", **Section 2.4 Per-Hop Behaviors (PHBs)**);

a plurality of transport interfaces (**buffers of nodes within DS domain**) ("Nodes within the DS domain select the forwarding behavior for packets based on their **DS codepoint**", **Section 2.1 Differentiated Services Domain**, and "PHBs are implemented in nodes by means of some buffer management...") operatively coupled to the service interface (**buffers of DS boundary nodes**), the service interface assigning a first data packet having a first differentiated service codepoint value to a first transport interface according to the differentiated service profile (**DS boundary nodes and nodes within DS domain**) (it is Examiner's position that the DS domain can be the apparatus with boundary nodes as service interface that pass a data packet to nodes within domain as transport interface according to DSCP).

With regard to claim 2, RFC discloses a service interface (**buffers of DS boundary node**) that assigns a second data packet (**ingress traffic**) having a second differentiated service codepoint value (it is Examiner's position that **DS codepoint**

**has different values)** to a second transport interface (**buffers of nodes within DS domain)** according to the differentiated service profile (**PHB group**) (“**A DS domain has a well-defined boundary consisting of DS boundary nodes which classify ... ingress traffic ... to ensure that packets which transit the domain are appropriately marked to select a PHB from one of the PHB groups supported within the domain, Section 2.1 Differentiated Services Domain).**

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 6-15,17-19,21,22,26-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over RFC in view of Chow et al. (US. Pat No. 7,072,300).

With regard to claim 6, RFC discloses the apparatus of claim 2. However, RFC fails to explicitly show data packets received at the service interface includes a first subset of the data packets having a first class of service and a second subset of the data packets having a second class of service.

Chow discloses data packets (**data frames in, Fig. 3**) received at the service interface (**output control queues 240 in Fig. 3, col. 7, line 21**) includes a first subset of the data packets having a first class of service (**H/L priority queues 350 in Fig. 3,**

**col. 7, lines 21-22)** and a second subset of the data packets having a second class of service **(another pair of H/L priority queues 350 in Fig. 3, col. 7, lines 21-22)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include data packets received at the service interface includes a first subset of the data packets having a first class of service and a second subset of the data packets having a second class of service in RFC's apparatus. The suggestion/motivation for doing so would have been to efficiently creating action tags that describe forwarding properties for packets received in a packet-based network. Chow, col. 1, lines 48-50. Therefore, it would have been obvious to combine Chow with RFC for the benefit of data packets received at the service interface includes a first subset of the data packets having a first class of service and a second subset of the data packets having a second class of service, to obtain the invention as specified in claim 6.

With regard to claim 7, the combination of RFC and Chow discloses the apparatus of claim 6.

Chow further discloses a first transport interface transports the first subset of data packets having the first class of service **(pair of H/L priority queues 350 in Fig. 3, col. 7, lines 21-22)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a first transport interface transports the first subset of data packets having the first class of service in RFC and Chow. The suggestion/motivation

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for doing so would have been to efficiently creating action tags that describe forwarding properties for packets received in a packet-based network. Chow, col. 1, lines 48-50.

Therefore, it would have been obvious to combine a first transport interface transports the first subset of data packets having the first class of service with RFC and Chow for the benefit of a first transport interface transports the first subset of data packets having the first class of service, to obtain the invention as specified in claim 7.

With regard to claim 8, the combination of RFC and Chow discloses the apparatus of claim 7.

Chow further discloses a second transport interface transports the second subset of data packets having the second class of service **(another pair of H/L priority queues 350 in Fig. 3, col. 7, lines 21-22).**

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a second transport interface transports the second subset of data packets having the second class of service in RFC and Chow. The suggestion/motivation for doing so would have been to efficiently creating action tags that describe forwarding properties for packets received in a packet-based network. Chow, col. 1, lines 48-50. Therefore, it would have been obvious to combine a second transport interface transports the second subset of data packets having the second class of service with RFC and Chow for the benefit of a second transport interface transports the second subset of data packets having the second class of service, to obtain the invention as specified in claim 8.

With regard to claim 9, the combination of RFC and Chow discloses the apparatus of claim 8.

Chow further disclose differentiated serviced profile maps (**action memory 412 in Fig. 4, col. 7, line 65**) the first differentiated service codepoint value (**DSCP in Fig. 6, col. 8, lines 53-54**) to the first class of service and a first drop precedence and maps the second differentiated service and a second drop precedence.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include differentiated serviced profile maps the first differentiated service codepoint value to the first class of service and a first drop precedence and maps the second differentiated service and a second drop precedence in RFC and Chow. The suggestion/motivation for doing so would have been to efficiently creating action tags that describe forwarding properties for packets received in a packet-based network. Chow, col. 1, lines 48-50. Therefore, it would have been obvious to combine differentiated serviced profile maps the first differentiated service codepoint value to the first class of service and a first drop precedence and maps the second differentiated service and a second drop precedence with RFC and Chow for the benefit of differentiated serviced profile maps the first differentiated service codepoint value to the first class of service and a first drop precedence and maps the second differentiated service and a second drop precedence, to obtain the invention as specified in claim 9.

With regard to claim 10, see analyses for claims 1 and 6.



With regard to claims 11-15

With regard to claims 17-18

With regard to claim 19, see analyses for claims 1 and 6.

With regard to claim 21, see analyses for claims 1 and 6.

With regard to claim 22, see analyses for claim 21 and claim 9.

With regard to claim 26, see analysis for claim 19.

With regard to claim 27, see analysis for claim 20.

With regard to claim 28-30, see analysis for claim 9.

***Allowable Subject Matter***

6. Claims 3-5,16,20,23-25,31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Rw*

BW

October 16, 2006

A handwritten signature in black ink, appearing to read 'Huy D. Vu', with a long horizontal flourish extending to the right.

HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600